RUNNING HEAD: EXPLORING BODY PERCEPTION'S RELATIONSHIP

Exploring Body Perception's Relationship to Dietary and Exercise Behaviors in Young Adult Males: What Factors are Important?

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Abstract

This study aims to explore the interrelationships between body perception, sexual identity, depression, dietary behaviors and exercise behaviors in young adult men. While most research on body perception has focused on eating disorders in adolescent girls, socio-cultural norms for masculinity cause anxiety in young men. Consequently, the desire for muscularity may lead young men to participate in risky dietary and exercise behaviors. This study includes 2253 males aged 18-28 from the Wave III core in-home sample of the Longitudinal Study of Adolescent Health (Add Health), a nationally representative sample. For this secondary analysis, Wave III cross-sectional weights were applied. Using a socio-ecological perspective, intra-personal factors were: age, health, sexual identity formation, body perception, current eating behaviors, current exercise behaviors, and depression. School enrollment was an interpersonal factor and ethnicity was examined as an extra-personal variable. Descriptive statistics, Pearson correlations, and independent t-tests were conducted with $p < .05$ as significant. Mean age = 21.9 (SD=1.87). Most men were Caucasian (66.4%); 17.3% were Black, and 9.3% Native American. Nearly 5% reported having been attracted to a male but only 2.1% reported being either bisexual or gay. One quarter of the men were currently attending school. Most (96.1%) considered their health from good to excellent. Only 52% considered their self-perception of weight "about right". Half of the men reported making efforts to change their weight. Engagement in risky dietary and exercise behaviors was reported. Nearly 5% reported depressive symptoms. Most body perception research has focused only on young women. Understanding the factors that contribute to body image perception in young men is needed to impact adverse health outcomes that result from risky dietary and exercise behaviors.

Exploring Body Perception's Relationship to Dietary and Exercise Behaviors in Young Adult Males: What Factors are Important?

Societal and cultural norms for appearance teach people at an early age that their value is dependent upon their appearance. Most research on body perception has focused on eating behaviors and body dissatisfaction in adolescent girls (DeLeel, Hughes, Miller, Hipwell, 2009; Mousa, Al-Domi, Mashal, & Jibril, 2009; Soo, Shariff, Taib, & Sama, 2008). A meta-analysis conducted by Groesz, Levine, & Murnen (2002) suggests that body dissatisfaction among adolescent girls is elicited by the promotion of slender ideals in the mass media. Dissatisfaction in body size has been found to be significantly associated with dietary restrain and binge eating among adolescent girls, thus linking body perception and eating behaviors (Soo, Shariff, Taib, & Samah, 2008). While eating behaviors and body dissatisfaction are areas of concern in adolescent females, it is important to note that young men are not immune to social influences that endorse a certain body type (Grieve, 2007).

Socio-cultural norms for masculinity also influence and shape young men. The desire for muscularity and to obtain a muscular physique can lead young men to participate in behaviors aimed at increasing weight or musculature. Such behaviors may include developing abnormal or disordered eating patterns, exercising compulsively, taking excessive sports supplements, and experimenting with illegal substances (Mosley, 2008). Additionally, young men may become preoccupied with the idea that their bodies are insufficiently lean or muscular. This newer form of body image disturbance is known as muscle dysmorphia, and may lead to adverse health outcomes in young men (Pope et al. 2005). Research has found individuals with muscle dysmorphia were more likely to have attempted suicide, had poorer quality of life, and had a

higher frequency of any substance use disorder and anabolic steroid use (Pope et al. 2005). Such adverse health outcomes warrant further study of body perception in young adult males.

This study was guided by an ecological framework. The ecological framework is based on the premise that health behaviors have multiple levels of influence. The multiple levels of influence include: (a) intrapersonal factors (biological, psychological), (b) interpersonal factors (social, cultural), and (c) extra-personal factors (community, public policy). The ecological framework proposes that the factors are interdependent and interact. Though the exploration of multiple interacting factors that influence behaviors, the ecological framework aims to guide the development of more comprehensive interventions that influences health behaviors and ultimately the health of individuals (Sallis,Owen & Fisher, 2008).

Much research has been conducted on the topics of body perception, eating behaviors, and sexuality in men (Hausmann, Mangweth, Walch, Rupp, & Pope, 2004; Kaminski, Chapman, Haynes, & Own, 2005; Boroughs & Thompson, 2002). Most all of the studies conducted have been cross-sectional, have relied on convenience samples, have had small sample sizes, and were not nationally representative (Kaminski, Chapman, Haynes, & Own, 2005; Boroughs & Thompson, 2002; Peplau et al., 2009). Because of these limitations, findings from the studies have been inconsistent, specifically regarding a difference in body dissatisfaction and eating behaviors between homosexual and heterosexual males. Furthermore, studies generally have failed to explore general health and its relationship to male body perception. Therefore, more research is needed to fully understand the relationships between general health and body perception, depression and body perception, sexual identity formation and body perception, and body perception and behaviors of diet and exercise.

This study will build on previous research by examining a national representative sample of males. The purpose of this study is to explore the interrelationships between body perception, sexual identity formation, depression, general health and health behaviors, specifically dietary and exercise behaviors in young adult men. Research questions include:

a) Is depression related to one's body perception?
b) Is general health related to one's body perception?
c) Is sexual identity formation related to one's body perception?
d) Is one's body perception related to dietary behaviors?
e) Is one's body perception related to exercise behaviors?
f) Is one's body perception related to ethnicity?

Review of Literature

A review of literature was conducted using the PubMed database and the following search terms: adolescent males, eating behaviors, ethnicity, exercise, depression, general health, homosexual, and sexual identity. The following review presents the current knowledge regarding the variables included in this study through the lens of an ecological framework. The review includes the intrapersonal factors of sexual identity formation, depression, and general health, examines school enrollment as an interpersonal factor, examines ethnicity as an extra-personal factor, and also reviews the health behaviors of eating and exercise.

Intra-personal Factors

Sexual identity formation. Most research conducted that explores the relationship between sexual identity and male body perception compares groups of homosexual and heterosexual men, with conflicting results (Kaminski, Chapman, Haynes, & Own, 2005; Peplau et al., 2009; Yelland & Tiggemann, 2003). Several studies have found homosexual men to be

more prone to body dissatisfaction than heterosexual men (Siever, 1994; Silberstein, Mishkind, Striegel-Moore, Timko, & Rodin, 1989). Others have found homosexual men to be indistinguishable from heterosexual men on measures of both body ideals and body image distortion (Hausmann, Mangweth, Walch, Rupp, & Pope, 2004). However, general appearance has been found to be more important to homosexual men than heterosexual men, with appearance considered more central to their sense of self (Kaminski, Chapman, Haynes, & Own, 2005; Silberstein, Mishkind, Striegel-Moore, Timko, & Rodin 1989). Kaminski et al. found that homosexual men were more likely than heterosexual men to have distorted perceptions regarding the importance of having an ideal body type. Accordingly, homosexual men believe their partner prefers a thinner figure compared to partner preferences of heterosexual men (Boroughs & Thompson, 2002).

Though homosexual and heterosexual men differ regarding the perceived importance of general appearance and partner preferences, similarities exist. Hausmann, Mangweth, Walch, Rupp, and Pope (2004) found no significant difference between homosexual and heterosexual men regarding perceived ideal body size. The aspired ideal of homosexual men, though much more muscular than they were themselves, was nearly identical to the aspired ideal of heterosexual men (Hausman, et al., 2004). Consequently, homosexual men do not display an unrealistic body ideal when compared to heterosexual men.

Less research has been conducted examining the population of males with unformed or developing sexual identities. Though little information exists, sexual identity stage has been positively and significantly correlated with body perception in white gay men (Udall-Weiner, 2009). Consequently, more research is needed that focuses on sexual identity formation and body perception, specifically on males with an unformed sexual identity.

Depression. Disordered eating and body image both contribute to depressive symptoms in adolescents (Brausch & Gutierrez, 2009). Men with eating disorders differ from those without eating disorders in comorbid psychiatric disorders and the level of body image satisfaction (Olivardia et al., 1995). Men with eating disorders also have a higher rate of mood disorders and differ significantly on several measures of adverse childhood experiences, including childhood beatings or sexual abuse, compared to men without eating disorders. While depression is affected by disordered eating and body image, it is also affected by race. Depression varies across ethnic groups, and is more severe in Asian-Americans than Caucasians (Young, Fang, & Zisook, 2010). Depression is also affected by gender. While major depression rates are highest for women (Young, Fang, & Zisook, 2010), depression is an area of serious concern for men as well. Among Korean adolescent males and females dissatisfied with their bodies, underweight males exhibited the highest proportion of suicidal ideation (Kim, 2009).

General health. Much research has been conducted on the self perception of weight status or body size and one's health of adolescents and young adults (Cheung, Ip, Lam, & Bibby, 2007; Kim, Cho, Cho, & Lim, 2009; Strauss, 2010). However, these studies are limited due to their exclusion of men and their failure to focus on adolescents from Western societies (Cheung, Ip, Lam, & Bibby, 2007; Kim, Cho, Cho, & Lim, 2009; Neff, Sargent, McKeown, Jackson, & Valois, 1997). Furthermore, most studies have focused solely on specific health or disease conditions such as asthma (Karjalainen, 1990; Latvala, Von Hertzen, Lindholm, & Haahtela, 2005) or diabetes (Tirosh et al., 2005; Tirosh et al., 2008) rather than general health status. Consequently, little is known about the general health status of young adult men especially young men from the United States. More research is needed to fully assess the self perception of general health in this population of adolescents and young men. Additionally, more research is

needed involving young men from Western societies such as the United States and other countries to examine differences in general health that may exist between ethnic or racial groups.

Extra-personal Factors

Ethnicity. Body image concerns vary across cultural groups. A review conducted by Ricciardelli, McCabe, Williams & Thompson (2007) found that Black American males displayed a more positive body image, were less likely to perceive themselves as being overweight, and along with Pacific Islanders reported a preference for a larger body type compared to White males. Native Americans and Native Australians reported higher body dissatisfaction and body importance scores than White males. Few differences body image existed between Hispanic and White males. Additionally, males from diverse cultural groups (Blacks in the U.S., South Africa and Swaziland; Hispanic Americans; Asians; and Native Americans) engaged in more extreme body altering strategies and binge eating compared to Whites, and males from developing countries with quickly changing social structures were at greater risk of developing eating problems than White males.

Health Behaviors

Exercise behaviors. Lower body satisfaction is known to predict higher levels of unhealthy weight control behaviors in adolescent males (Neumark-Sztainer, et al., 2006). In a study of eating and exercise disorders in young college men, O'Dea & Abraham (2002) found nearly 50 percent of male college students reported exercise as being important for their self-esteem. Additionally, nearly one-third of the men sampled admitted to experiencing distress if they were not able to exercise as much as they desired. Much research has been conducted to investigate the hypothesis that homosexual men Homosexual men are no more likely than straight men to participate in compulsive exercise behaviors (Kaminski, et al., 2005).

Additionally, homosexual men and heterosexual men do not differ in the degree to which they exercise or feel guilty about missing a workout (Kaminski, Chapman, Haynes & Own, 2005). However, while homosexual and heterosexual men have similar exercise behaviors, the motivation to participate in exercise differs. Exercise by homosexuals is motivated by a desire to increase physical attractiveness, while heterosexual males exercise significantly more often to improve their fitness, their overall health, and for enjoyment (Silberstein, et al., 1989). More research is needed to investigate the exercise patterns of men with unformed sexual identities, and variations that may exist due to age and ethnic differences.

Eating behaviors. While most research on body image has focused on eating disorders in adolescent girls, it is important to note that young men are also negatively afflicted by disordered eating behaviors (O'Dea & Abraham, 2002). College-aged men with eating disorders closely resemble college-aged women with eating disorders on factors including age at onset, methods of weight control, attitudes toward the eating disorder, rates of comorbid psychiatric disorders, and dissatisfaction with body proportions and weight (Olivardia, Mangweth, & Hudson, 1995). However men with eating disorders are significantly less likely to seek treatment compared to the females with similar symptoms (O'Dea & Abraham, 2002; Olivardia, Mangweth, & Hudson, 1995).

Olivardia et al. (1995) found that men with eating disorders did not have a higher than average rate of homosexuality. Similarly, Hausmann et al. (2004) found no overall differences in disordered eating patterns between homosexual and heterosexual men but homosexual men who desired to be thinner displayed heightened attitudes and behaviors associated with disordered eating patterns. Other research also has found that homosexual orientation is associated with greater body dissatisfaction and disordered eating behaviors in males (French,

Story, Remafedi, Resnick, & Blum, 1994). Similarly, Kaminski et al. (2005) found that gay men diet more frequently, are more fearful of becoming fat, and experience greater overall body dissatisfaction compared to heterosexual men. Finally, Boroughs and Thompson (2002) also found gay males to have a higher level of eating disturbance patterns compared to heterosexual males. What is not reported in the literature are the eating patterns of bisexual men or men with unformed sexual identities. The conflicting results of completed studies and lacking knowledge about sexual identity and eating patterns indicate that these factors are not well understood and are in need of further investigation.

Methodology

This correlational study was conducted by secondary data analysis using a sub-sample of the Longitudinal Study of Adolescent Health database, which is a nationally representative data set. For this non-probability survey, an in school self-administered questionnaire was given to students in grades 7 to 12 from September 1994 through April 1995, during a class period. This questionnaire was completed by more than 90,000 adolescents and measured interpersonal factors; family and peer relationships; academic, sport and student organizational activities; and a variety of health and risk behaviors, including eating and exercise behaviors. All students who completed the in-school questionnaire, as well as those who were listed in the school roster, were used as a sampling frame to select a random sample of 12,105 adolescents, stratified by gender and grade, and were later interviewed in their homes.

During the in-home interviews, respondents read questions and recorded responses on a computer. Trained interviewers were present to answer any questions. Approximately 17 students were chosen from each stratum so that approximately 200 adolescents were selected from each of the 80 pairs of schools. This sample is called the "core sample" (Dittus & Jaccard,

2000). In addition, there were several special over-samples. These included 334 Chinese adolescents, 450 Cuban adolescents, and 437 Puerto Rican adolescents (Dittus & Jaccard, 2000). Sampling was repeated in 2001 for the Wave III data cycle. The Add Health data are available in two forms: public-use and contractual release. The un-weighted sample of the current study consisted of 2253 males. For the present cross-sectional analysis, the Wave III core in-home sample of males included in the public-release release data was used.

All measures were analyzed for missing, refused, don't know and skipped values (see Table 1). All measures had missing, refused or don't know values ranging from 0-0.5%. Consequently, it is assumed that these rates are random and all measures were deemed acceptable for inclusion in the study. The rate of legitimately skipping a measure ranged from 66-74%. Behaviors engaged in to gain or lose weight were coded as legitimately skipped if the respondent was not trying to change current weight.

Measures

All measures used for this study have been used extensively with adolescents and young adults in prior published research (Udry, 1998). Previous studies showed acceptable reliability coefficients with this particular population

Sexual identity formation. Sexual orientation was measured by creating a sexual identity formation variable with two categories. Respondents identifying as 100% heterosexual, 100% homosexual, and bisexual were coded as a zero and assigned to the category of "formed identity." Respondents identifying as mostly heterosexual, mostly homosexual, and not attracted to either were coded as a 1 and assigned to the category of "developing identity." Thus a higher value for the sexual identity formation variable was indicative of a developing sexual identity, while a lower value was indicative of a formed sexual identity.

Body perception. Self-perception of weight was used to define body perception in this study. A body perception scale was created from the variable "self-perception of weight" ranging from very underweight to very overweight. Two groups were created from this variable, an unhealthy body perception group and a healthy body perception group. Respondents identifying as very overweight or very underweight were coded as a one and assigned to the unhealthy body perception group. Respondents identifying as slightly underweight, slightly overweight, or about the right weight were coded as a zero and assigned to the healthy body perception group. Thus a higher value for the body perception scale was indicative of a poor body perception, while a lower value was indicative of a positive body perception.

Depression. A summative scale of depression was created using the following items: enjoyed life, felt people disliked me, sad in past week, too tired to do things, depressed in past week, trouble keeping mind on things, could not shake off blues, bothered by things past 7 days, how satisfied with life. The depression scale reliability coefficient was $\alpha = 0.733$. The scale was coded such that a higher score on the depression scale was indicative of a higher level of depression in the respondent.

Exercise behavior. An exercise behavior scale was measured using a summative scale. The following variables were included: exercise to lose weight, exercised to gain weight, lifted weights to gain weight, and number of times at an exercise or fitness center. All behaviors refer to the past 7 days. A higher score on the exercise behavior scale was indicative of active exercise behaviors aimed at gaining or losing weight. Additionally, the variable "Number of times at an exercise or fitness center past 7 days" was examined by itself. This variable was recoded into two categories to account for normal healthy exercise behaviors. Respondents answering 7 or less were coded as a zero and assigned to the category of "healthy exercise

behaviors." Respondents answering 8 or more were coded as a one and assigned to the category of "unhealthy exercise behaviors."

Dietary behaviors. A dietary behavior scale was created using the following variables: diet to lose weight, ate different foods to gain weight, took food supplements to lose weight, took food supplements to gain weight, and ate more to gain weight. All items refer to behaviors within the past 7 days. A higher score on the dietary behavior scale was indicative of active dietary behaviors aimed at changing weight. Dietary behaviors were also broken up into two separate dietary scales: behaviors to gain weight and behaviors to lose weight. The behaviors to gain weight scale included the following variables: ate different foods to gain weight past 7 days, took food supplements to gain weight past 7 days, and ate more to gain weight past 7 days. The behaviors to lose weight scale included the following variables: diet to lose weight past 7 days and took food supplements to lose weight past 7 days. Additionally, the variable "Currently doing anything about weight" was examined separately.

Results

See Table 2 for the sample demographic overview. The sample mean age = 21.9 (SD=1.87). Most males were Caucasian (66.4%); 17.3% Black, 9.3% Native American, and 7.0% Asian/Pacific Islander. Most identified as 100% heterosexual (94.6%). Nearly 5% men reported having been attracted to a male but only 2.1% reported being either bisexual or gay. One quarter of the men were currently attending school. Most men (96.1%) considered their health either good or excellent. Only 52% considered their self-perception of weight "about right". Half of the men reported making efforts to change their weight. Engagement in risky dietary and exercise behaviors was reported. Nearly 5% reported depressive symptoms and anxiety.

Is depression related to one's body perception? The 9-item depression scale had a mean of 10.50 (SD = 3.93). The relationship between depression and body perception was weakly related (r = .081, p = .000). Therefore, respondents reporting more depressive symptoms also had reported higher scores on the body perception scale, indicating a more unhealthy body size.

Is perceived general health related to one's body perception? A moderate relationship between perceived general health and body perception was found (r = .219, p=000). Thus, men reporting a perceived unhealthy body size also perceived their general health as poorer.

Is sexual identity related to one's body perception? The relationship between general health and body perception was not statistically significant (r = .032, p=.135). Therefore, having a either a formed (heterosexual, homosexual, or bisexual) or an unformed sexual identity was not related to one's perceived body size (healthy or unhealthy).

Is one's body perception related to dietary behaviors? Body perception was moderately related to behaviors engaged in changing weight (r = .258, p = .000). This result indicates that those men with a more unhealthy body perception were engaging in behaviors to change weight. "Currently doing anything about weight" was moderately related to the dietary behavior scale (R=.320, p = .000). The relationship between one's body perception and dietary behaviors to gain weight was not significant (r = .008, p=.836); however, one's body perception's was weakly related to dietary behaviors to lose weight (r=.108; p = .003).

Is body perception related to exercise behaviors? One's body perception was not related to exercise behaviors. Body perception was not related to the number of times respondent exercised in past week (r = -.002, p = .918). Similarly, one's body perception was not related to

the exercise behavior scale (r =.002, p = .908). These findings indicate that men who perceive their body size as unhealthy did not differ from men with a body size perceived as more healthy in the frequency or intensity of exercise behaviors.

Is body perception related to ethnicity? An analysis of variance (ANOVA) was conducted to compare ethnic group differences in body perception. Results indicate a positive relationship between body perception and ethnicity was significant (F value = 57.36, p=.000). Thus, ethnic differences in one's perceived body size exist. More Caucasians and Hispanics reported a more unhealthy body size compared to African Americans, Native Americans, and Asians.

Discussion

The results of this study have practice and research implications. While most research focusing on body perception has focused exclusively on adolescent and young adult females, body image perception is also an important area of concern for young men. Nearly all young adult males in this nationally representative sample considered their general health either good or excellent, only 52% of the males considered their self perception of weight "about right." Furthermore, men reporting a poorer perceived body size also reported that their general health was poorer. What is not known is if one's body perception impacts perceived health or if one's overall health impacts body perception, especially in males. Accordingly, future research in body perception in young adults should focus not only on young women, but include young men as well. Future research should be conducted using longitudinal designs to better understand the relationship between male body perception and general health. However, similarly to females, males' perceived body perception relates to engagement in health behaviors, indicating important practice implications.

Our study found that male body perception was moderately related to behaviors engaged to changing weight. Men with a more unhealthy self body perception were engaging in behaviors to change weight. Surprisingly, the behaviors engaged in seem to be dietary rather than exercise behaviors. We expected that males would be more likely to change their weight through exercise behaviors as well. While "Currently doing anything about weight" was moderately related to the dietary behaviors scale, one's body perception was not related to exercise behaviors. Similarly, one's body perception was not related to the exercise behaviors scale. This finding may be due to the ease of dieting, lack of access to exercise facilities, or lack of time for lengthy exercise regimens. These findings suggest that health care practitioners need to more adequately assess and screen young males for distorted body perception and behaviors engaged in to change body weight. What is not known is if males follow similar dietary regimes to change weight as females. Males may engage in different dietary behaviors such as nutrient supplementation that may lead to weight gain rather than nutrient restriction. Further research should seek to identify what specifically young men are doing in terms of dietary behaviors to change their weight. The dietary behavior scale included not only dieting behaviors, but also supplementation behaviors, and behaviors to gain weight, though these behaviors were not differentiated.

Differences in male perceived body perception based on one's ethnicity exist. In our nationally representative sample of young adult males, Caucasian and Hispanic males were found to have a poorer self body perception, compared to African Americans, Native Americans, and Asians. This was in agreement with existing literature examining ethnicity and body image (Ricciardelli, McCabe, Williams & Thompson, 2007). These differences in perceived body perception are not surprising when one considers the differences that exist in body type amongst ethnicities. Different ethnicities display differences in muscle mass, body structure, and overall

body type. Variations in these factors may be perceived as more or less masculine, and may therefore contribute the variation that is seen across ethnicities regarding perceived body perception in males. Also, variation in perceived body perception may exist across ethnicities due media influence and the targeted audience of advertisement.

In addition to one's general health, perceived body perception was related to emotional or mental health. Our study found that depression was positively related to one's body perception. Respondents reporting more depressive symptoms also reported higher scores on the body perception scale indicating a poorer body perception. What is not known is the causal relationship between depression and body perception. For example, it is not known if males who are depressed perceive their body size as poor or if males with a poor body perception develop a depressed mental state. However, our results suggest that health care practitioners should more adequately assess males for depression and body perception concurrently. Furthermore, the relationship between male body perception and depression warrants further research. A more comprehensive understanding of male body perception would allot for a better understanding of mental health in this population. Understanding the interaction between depression and body perception would allow for more holistic interventions aimed at both improving mental health and developing a healthy body perception in young men.

Our study is one of the first to include sexual identity formation and its relationship to body perception in a nationally representative sample of young adult men. The level of sexual identity formation was not related to one's perceived body size. Having either a formed (heterosexual, homosexual, bisexual) or unformed (mostly heterosexual, mostly homosexual, mostly bisexual or unsure) sexual identity was not related to perceived body size. This was contrary to our prediction that young men struggling with their sexual identity would also be

struggling with their body image perception. While this study focused only on having either a formed or unformed sexual identity, future research may focus on differences in body image perception that exist between sexual orientations to build on the conflicting research that currently exists surrounding the topic (Hausmann, Mangweth, Walch, Rupp, & Pope, 2004; Siever, 1994; Silberstein, Mishkind, Striegel-Moore, Timko, & Rodin, 1989). While some studies have found homosexuals to be more prone to body dissatisfaction than heterosexuals, other have found the two groups to indistinguishable on measures of body ideals and body image distortion. Future research should utilize a nationally representative sample to answer questions and fill in the gaps regarding differences in body perception between homosexual and heterosexual men.

This study represents a first step to examining body image perception in adolescent males on a national level. Also, this is one of few studies to examine sexual identity formation in a nationally representative sample of young adult men. The results of this study demonstrate that body image research should not be exclusive to adolescent females, but should include adolescent males as well. It is important that general practitioners assess adolescent males for weight changing behaviors that may result in adverse health outcomes, and discuss body self perception with this population that has long been overlooked. Further research in the areas of body perception, sexual identity, depression, and dietary and exercise behaviors in young men will allow for the development of holistic interventions aimed at improving health outcomes in this population.

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Table 1

Missing Values

Variable	**Missing/Don't Know/NA (%)**
Biological Sex	0
Racial Background	.1
Going to School Full/Part Time	0 or 67.8 (legitimate skip)
Respondent's Health Status	0
Respondent's Self-Perception of Weight	0
Currently Doing Anything About Weight	.2 (Don't Know/NA)
Diet to Lose Weight Past 7 Days	66.6(legitimate skip) + .6(NA) = 67.2
Ate Different Foods to Gain Weight Past 7 Days	74.3(legitimate skip) + .1(NA) = 74.4
Took Food Supplements to Lose Weight Past 7 Days	66.6(legitimate skip) + .1(NA) = 66.7
Took Food Supplements to Gain Weight Past 7 Days	74.3(legitimate skip)
Ate More to Gain Weight Past 7 Days	74.3(legitimate skip)
Exercise to Lose Weight Past 7 Days	66.6(legitimate skip) + .1(NA) = 66.7
# Times Exercise or Fitness Center Past 7 Days	.2(don't know)
Exercised to Gain Weight Past 7 Days	74.3(legitimate skip)
Lifted Weights to Gain Weight Past 7 Days	74.3(legitimate skip)
How Satisfied With Life as a Whole	.1(refused) + .1(don't know) = .2
Bothered by Things that Usually Don't Bother Past 7 Days	.1(refused) + .1(don't know) = .2
Could Not Shake Off Blues Even With Help Past 7 Days	.1(refused) + .2(don't know) = .3
Felt Just As Good As Other People Past 7 Days	.1(refused) + .3(don't know) = .4

Trouble Keeping Mind on What Doing Past 7 Days	.1(refused) + .2(don't know) = .3
Depressed in Past 7 Days	.1(refused) + .2(don't know) = .3
Too Tired to do Things Past 7 Days	.2(don't know)
Enjoyed Life Past 7 Days	.1(don't know)
Sad in Past 7 Days	.1(refused) +.1(don't know) = .2
Felt That People Disliked Me Past 7 Days	.2(don't know) = .3
Ever Romantic Attraction to Female	.2(refused) + .4(NA) = .6
Ever Romantic Attraction to Male	.1(refused) + .5(NA) = .6
Self-Description of Sexual Orientation	.2(refused) + .3(don't know) + .5(NA) = 1.0

Table 2

Demographics

Variable	**(%)**
Race	
White	66.4
Black	17.3
American Indian/Native American	9.3
Asian/Pacific Islander	7.0
School Enrollment	
Currently Enrolled	32.2
Full Time	75.7
Part Time	24.3
Not Currently Enrolled	67.8
Health Status	
Excellent	35.8
Very Good	40.2
Good	20.1
Fair	3.6
Poor	0.2
Self Perception of Weight	
Very Underweight	1.3
Slightly Underweight	15.7

About the Right Weight	52.5
Slightly Overweight	27.9
Very Overweight	2.5
Currently Doing Anything About Weight	
Lose Weight	20.4
Gain Weight/Bulk Up	25.7
Stay the Same Weight	13.1
Not Do Anything About Weight	40.8
Self-Description of Sexual Orientation	
100% Heterosexual (Straight)	94.6
Mostly Heterosexual (Straight)	2.7
Bisexual	0.5
Mostly Homosexual (Gay)	0.7
100% Homosexual (Gay)	0.9
Not Attracted to Males or Females	0.6